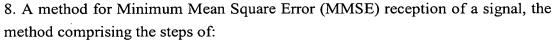
## Claims

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- 1. An apparatus comprising:
- a first Minimum Mean Square Error (MMSE) receiver having a signal as an input, wherein the signal was transmitted utilizing a transmit-diversity scheme; and
  - a second MMSE receiver having the signal as an input.
- The apparatus of claim 1 further comprising a first despreader having an output
   from the first MMSE receiver as an input and despreading the output from the first
   MMSE receiver with a sector-specific long code to produce a first despread output.
- 3. The apparatus of claim 2 further comprising a second despreader having an output from the second MMSE receiver as an input and despreading the output with a second sector-specific long code to produce a second despread output.
  - 4. The apparatus of claim 2 further comprising a second despreader having an output from the second MMSE receiver as an input and despreading the output with a the sector-specific long code to produce a second despread output.
  - 5. The apparatus of claim 2 further comprising a third despreader having the first despread output as an input and further despreading the first despread output with a first Walsh code.
  - 6. The apparatus of claim 5 further comprising a fourth despreader having the second despread output as an input and further despreading the second despread output with a second Walsh code.
- 7. The apparatus of claim 5 further comprising a fourth despreader having the second despread output as an input and further despreading the second despread output with the first Walsh code.

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receiving a pilot signal at an MMSE receiver;

performing a channel estimate for the received pilot signal;

determining a mean-square error of the pilot signal estimate;

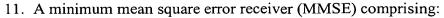
updating a weighting vector for the pilot signal estimate in order to minimize the mean square error of the pilot signal estimate; and

applying the weighting vector for the pilot signal estimate to a second channel.

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- 9. The method of claim 8 wherein the step of receiving the pilot signal at the MMSE receiver comprises the step of receiving a Code Division Multiple Access, CDMA pilot signal at the MMSE receiver.
- 15 10. The method of claim 9 wherein the step of applying the weighting vector to the second channel comprises the step of applying the weighting vector to a traffic channel.



- a pilot channel input;
- a second channel input;

an output comprising an estimate of the pilot channel, wherein the estimate of the pilot channel is determined by applying a weighting vector to the pilot channel; and

a second output comprising an estimate of the second channel, wherein the estimate of the second channel is determined by applying the weighting vector to the second channel.

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- 12. The MMSE receiver of claim 11 wherein the second channel input is a traffic channel input.
- 13. The MMSE receiver of claim 11 wherein the traffic channel input is a Code
  15 Division Multiple Access (CDMA) traffic channel input.
  - 14. The MMSE receiver of claim 12 wherein the pilot channel input is a CDMA pilot channel input.

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